

Notice of Allowability

Application No.

10/623,366

Applicant(s)

BULLA ET AL.

Examiner

Claire M. Kaufman

Art Unit

1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amd't of 7/13/03 and telephone interview for the Ex's Amd't of 3/31/06.
2. ☒ The allowed claim(s) is/are 29-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 01/20/04.
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kate Murashige on 2/21/06.

The application has been amended as follows:

Replace claim 29 with the following:

29. (currently amended): An isolated protein which binds cry1A(c), wherein said protein comprises

- a) the amino acid sequence at positions 1269-1367 of SEQ. ID. No.: 2; or
- b) the amino acid sequence at positions 24-1729 of SEQ. ID. No.: 2.; or
- c) an amino acid sequence at least 95% homologous to positions 1-1729 of SEQ. ID. No.: 2.

In claim 34, line 4, replace "pesticides" with --pesticide--.

In the specification:

On page 1, lines 1-2, replace "and now allowed" with --, now US Patent No. 6,660,497, which claims the benefit of US Provisional Application No. 60/161,564, filed October 26, 1999--

On page 7, line 10, replace "1439" with --1496--.

On page 7, line 11, replace "1210" with --1269--

On page 7, line 11, add --of SEQ ID NO:2-- before "(the minimum".

On page 7, line 16, after "(top", add --SEQ ID NO:17--.

On page 7, line 16, after "(middle", add --SEQ ID NO:18--.

On page 7, line 17, after "(bottom", add --SEQ ID NO:2--.

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Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The prior art does not teach or suggest the BT toxin receptor of *P. gossypiella* (bollworm) or related receptors as claimed in the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee et al. (Biochem. Biophys. Res. Comm., 220:575-580, 1996, reference #7 filed by Applicants) examined BT toxin (Cry1-type) binding to *L. dispar* membrane proteins. WO 98/59048 and US 5,693,491 (references #2 and 1, respectively, filed by Applicants) is by one of the instant inventor and teaches a BT toxin-binding fragment from *M. Sexta* (hornworm). Oddou et al. (Eur. J. Biochem., 212 :145-150, 1993) teaches membrane proteins from *Heliothis* and *Spodoptera* that bind BT toxins.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Claire M. Kaufman, whose telephone number is (571) 272-0873. Dr. Kaufman can generally be reached Monday, Tuesday, Thursday and Friday from 9:30AM to 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback, can be reached at (571) 272-0961.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Official papers filed by fax should be directed to (571) 273-8300. NOTE: If applicant *does* submit a paper by fax, the original signed copy should be retained by the applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Claire M. Kaufman, Ph.D.

Patent Examiner, Art Unit 1646

March 31, 2006

A handwritten signature in cursive script, reading "Lorraine Spector". The signature is written in dark ink and is positioned above the printed name and title.

**LORRAINE SPECTOR
PRIMARY EXAMINER**